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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,266	02/05/2001	William Sharpe	976.0089USU	5360

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EXAMINER

CHEN, CHONGSHAN

ART UNIT

PAPER NUMBER

2172

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,266

Applicant(s)

SHARPE ET AL.

Examiner

Chongshan Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This action is responsive to communications: Amendment B, filed on 5/29/2003.
This action is made final. Claims 1-5 and 7-17 are pending. Claim 6 is cancelled.

Response to Arguments

2. Applicant's arguments filed on 5/29/2003 regarding claims 1-5 and 7-17 have been fully considered but they are not persuasive.

As per applicant's arguments regarding "Applicant is unable to find any teaching or suggestion of using such a 'layout data type' in similarity searching in the proposed combination of Nelson and Herz" have been considered but are not persuasive.

Nelson discloses a layout data type information indicating the arrangement of the different data type within the query document (Nelson, Fig. 1-3, col. 2, line 28 – col. 3, line 18, col. 6, lines 35-65, col. 9, lines 18-53, "The position data may be character position, byte offset, word count, or any other useful unit indicating relative location of the component within the document"). Data type is a "class of data, characterized by the members of the class and the operations that can be applied to them. For example, character type, enumeration type, integer type, logical type, real type" ("The Authoritative Dictionary of IEEE standards terms", seventh edition, ISBN 0-7381-2601-2). It is obvious that the position information of Nelson is a data type, which indicates the layout of different data within the query document.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. ["Nelson", 6,243,713 B1] in view of Herz [6,460,036 B1].

As per claim 1, Nelson discloses a method of searching a database to find documents similar to a query document, comprising:

decomposing the query document into elements of different data types, including a layout data type indicating the arrangement of the different data type within the query document (Nelson, Fig. 3-5, col. 5, lines 52-55, "Compound documents are separated into constituent multimedia components of different data types, such as text, images, video, audio/voice, and other data type", col. 9, lines 18-53);

for one or more of the elements in a first data type, conducting a first data type similarity search to return match results from the database for the one or more elements in the first data type; for one or more of the elements in a second data type, conducting a second data type similarity search to return match results from the database for the one or more elements in the first data type (Nelson, col. 22, lines 31-34, "require the different types of multimedia components to be separately scored and evaluated, with separate queries"); and

combining the match results from the first data type similarity search and the second data type similarity search with the layout data type to provide query document match results (Nelson, Fig. 3-5, col. 9, lines 18-53, col. 22, lines 31-34, "the results of which are combined").

Nelson does not explicitly disclose the multimedia document is submitted by a user. Herz discloses a profile searching method that the query document is submitted by a user (Herz, col. 56, lines 23-25, "using copies of the profiles of target objects or target clusters that the user indicates are representative of his or her interest"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Herz with Nelson in order to free the burden of a user by allowing the user to submit a query document instead of typing the query.

As per claim 2, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses one of the data types is representative of text (Nelson, col. 5, lines 52-55, "Compound documents are separated into constituent multimedia components of different data types, such as text, images, video, audio/voice, and other data type.").

As per claim 3, Nelson and Herz teach all the claimed subject matters as discussed in claim 2, and further discloses a plurality of the data types are representative of text, separate data types of the plurality being representative of different functional blocks of text (Nelson, col. 5, lines 52-55).

As per claim 4, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses one of the data types is representative of pictorial images (Nelson, col. 5, lines 52-55).

As per claim 5, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses one of the data types is representative of graphical images (Nelson, col. 5, lines 52-55).

As per claim 7, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses the step of similarity searching to return match results is carried out, separately, for a plurality of elements having between them more than two data types (Nelson, col. 22, lines 31-34).

As per claim 8, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses all features of a common data type in the document are treated as one element (Nelson, col. 6, lines 1-34).

As per claim 9, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses spatially distinct features of a common data type in the document are treated as separate elements (Nelson, col. 6, lines 1-34).

As per claim 10, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses elements are user selectable or deselectable for the step of similarity searching (Nelson, col. 18, lines 1-10).

As per claim 11, Nelson and Herz teach all the claimed subject matters as discussed in claim 1, and further discloses the similarity searching results for separate elements are weighted before combination (Nelson, col. 22, lines 31-34).

As per claim 12, Nelson and Herz teach all the claimed subject matters as discussed in claim 11, and further disclose weighting is user selected (Nelson, col. 22, lines 1-6).

As per claim 13, Nelson and Herz teach all the claimed subject matters as discussed in claim 11, and further discloses weighting is attributed according to a determined significance of each relevant element in the document (Nelson, col. 21, lines 1-53).

As per claim 14, Nelson discloses a method of searching a database to find documents similar to a query document, comprising:

decomposing the query document into elements of different data types (Nelson, col. 5, lines 52-55, "Compound documents are separated into constituent multimedia components of different data types, such as text, images, video, audio/voice, and other data type.");

determining a layout element in a layout data type from the spatial arrangement of the elements in the document; and for the layout element, conducting a layout similarity search to return match results from the database for the layout element (Nelson, Fig. 3, col. 6, lines 35-65).

Nelson does not explicitly disclose the multimedia document is submitted by a user. Herz discloses a profile searching method that the query document is submitted by a user (Herz, col. 56, lines 23-25, "using copies of the profiles of target objects or target clusters that the user indicates are representative of his or her interest"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Herz with Nelson in order to free the burden of a user by allowing the user to submit a query document instead of typing the query.

As per claim 15, Nelson and Herz teach all the claimed subject matters as discussed in claim 14, and further discloses the layout similarity search involves searching against templates representative of different document types (Nelson, col. 8, lines 21-67).

As per claim 16, Nelson and Herz teach all the claimed subject matters as discussed in claim 14, and further discloses the elements include elements of separate data types representative of different functional blocks of text (Nelson, col. 5, lines 52-55).

As per claim 17, Nelson and Herz teach all the claimed subject matters as discussed in claim 14, and further discloses the elements include elements of data types representative of images (Nelson, col. 5, lines 52-55).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Syeda-Mahmood (6,178,417) discloses method and means of matching documents based on text genre.

Bobrow et al. (6,562,077) disclose sorting image segments into clusters based on a distance measurement.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is (703) 305-8319.

The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on (703)305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

CC
July 25, 2003


JEAN M. CORRIELUS
PRIMARY EXAMINER